

ABSTRACT OF THE DISCLOSURE

To provide a black toner having excellent charging property and transferring property against a severe environmental change. The black toner includes toner particle containing at least a binder resin, carbon black and a releasing agent, wherein: the toner particles have a weight-average particle diameter of 3.5 to 8.0 μm ; total amount of acid value and hydroxyl value of the toner is 30 to 75 mgKOH/g; average circularity of particles contained in the toner having circle-equivalent diameter of 2 μm or more is 0.915 to 0.960; loss tangent $\tan\delta$ (10^3 to 10^4 Hz) of the toner is represented by the following expression:

$$\tan\delta \text{ } (10^3 \text{ to } 10^4 \text{ Hz}) \leq 0.0060$$

where the loss tangent $\tan\delta$ is represented by $\varepsilon''/\varepsilon'$ where ε'' denotes dielectric loss factor and ε' denotes dielectric constant, and $\tan\delta$ (10^3 to 10^4 Hz) denotes the loss tangent in a frequency range of 10^3 to 10^4 Hz; and a ratio of $\tan\delta$ (10^5 Hz) to $\tan\delta$ (5×10^4 Hz) is represented by the following expression:

$$1.05 \leq \tan\delta \text{ } (10^5 \text{ Hz}) / \tan\delta \text{ } (5 \times 10^4 \text{ Hz}) \leq 1.40$$

where $\tan\delta$ (10^5 Hz) denotes loss tangent at the frequency of 10^5 Hz and $\tan\delta$ (5×10^4 Hz) denotes loss tangent at the frequency of 5×10^4 Hz.